AMENDMENTS TO THE CLAIMS

1. **(Currently Amended)** A method for the identification and/or the quantification of a target compound obtained from a sample, comprising the steps of:

putting into contact the target compound with a capture molecule in order to allow a specific binding between said target compound with a capture molecule, said capture molecule being fixed upon a surface of a solid support according to an array comprising a density of at least 20 discrete regions per cm^2, each of said discrete regions being fixed with one species of capture molecules;

performing a ~~reaction~~ catalytic reduction of a metal present in solution leading to formation of a metallic precipitate ~~formed at the location of said binding by the deposit of a metallic compound~~ in one or more discrete regions;

determining the possible presence of precipitate(s) in discrete region(s); and correlating the presence of the precipitate(s) at the discrete region(s) with the identification and/or a quantification of said target compound.

2. **(Canceled)**

3. **(Currently amended)** The method according to Claim ~~2~~ 1, wherein said metallic compound is a magnetic metallic compound.

4. **(Currently amended)** The method according to Claim 1, wherein the ~~reaction~~ catalytic reduction leading to the formation of the metallic precipitate is a reduction of a metal in the presence of an enzyme.

5. **(Currently amended)** The method according to Claim 1, wherein the ~~reaction~~ catalytic reduction leading to the formation of the metallic precipitate is a chemical reduction of silver in the presence of colloidal gold particles coupled to the bound target compound.

6. **(Previously presented)** The method according to Claim 1, wherein the specific binding between the target compound and its corresponding capture molecule is a hybridization between two nucleotide sequences.

7. **(Previously presented)** The method according to Claim 1, wherein the binding between the target compound and its corresponding capture molecule is a reaction between an antigenic structure and its corresponding antibody or a hypervariable portion thereof.

8. **(Previously presented)** The method according to Claim 1, wherein the binding between the target compound and its corresponding capture molecule is a reaction between a receptor and its corresponding ligand.

9. **(Previously presented)** The method according to Claim 1, wherein the possible presence of a precipitate is obtained by reflection, absorption or diffusion of a light beam[, preferably a laser beam,] upon said precipitate.

10. **(Previously presented)** The method according to Claim 1, wherein the presence of a precipitate in a discrete region is obtained by variation of an electromagnetic field or the conductance of an electric current.

11. **(Previously presented)** The method according to Claim 1, for the quantification of volume of one or more precipitate(s) upon a defined surface of the solid support, wherein images of said defined surface containing one or more precipitate(s) and corresponding to different views, said images containing analogue information, are taken by one or more camera(s) upon illumination by one or more illuminant source(s), spatially arranged relatively to each other according to a predetermined pattern and wherein the corresponding image analogue information of said defined surface containing said precipitate(s) are transformed and converted into digital form or ~ set of digital forms and compared to a first and to a second reference standards to determine the volume of the precipitate(s) to be quantified.

12. **(Previously presented)** The method according to Claim 11, wherein the first reference standard corresponds to a digital form or a set of digital forms obtained from analogue information contained in images taken on the surface of said solid support without precipitate.

13. **(Previously presented)** The method according to Claim 12, wherein the second reference standard corresponds to a digital form or a set of digital forms obtained from analogue information contained in images taken on the surface of said solid support containing precipitate(s) of known volume.

14. **(Currently Amended)** A diagnostic and/or quantification apparatus comprising:

a solid support comprising an array comprising at least 20 discrete regions per cm^2, each of said regions being fixed with one species of a capture molecule which recognizes a target compound, said target compounds bound to some of said capture ~~molecules~~ molecule leading to a catalytic reduction of a metal present in solution, and a formation of a metallic precipitate in one or more discrete region(s) ~~precipitate present at the location of said bound target compounds~~;

a detection and/or quantification device for detecting said precipitate in said discrete region(s); and

a computer programmed to collect the results obtained from said detection and/or quantification device.

15. **(Previously presented)** The apparatus according to Claim 14, comprising one or more sensor(s) provided with camera(s) and with one or more illuminant source(s) which are spatially arranged relatively to each other according to a predetermined pattern and which are associated with an analogue information acquisition system, said information being measured by using sensor(s) and being converted into digital form by a processing unit.

16. **(Previously presented)** The apparatus according to Claim 15, wherein the camera(s) are CCD or CMOS camera(s).

17. **(Previously presented)** The apparatus according to Claim 15, wherein the illuminant source is an infra-red light having a wavelength similar to a metal crystal contained in the precipitate(s).

18. **(Previously presented)** The apparatus according to Claim 15, which comprises a set of illuminant sources regularly spaced from each other in a plane, each of said sources corresponding to a light spot being automatically switched on, simultaneously or successively.

19. **(Previously presented)** The apparatus according to Claim 15, which comprises one camera and one illuminant source placed above the solid support, said camera and illuminant source being movable in three dimensions in space.

20. **(Previously presented)** The apparatus according to Claim 15, which comprises two or more cameras oppositely arranged in a plane and placed above the solid support, the apparatus comprising further one or more illuminant source(s) placed under the solid support.

21. **(Previously presented)** The apparatus according to Claim 15, which comprises three or more cameras arranged according to a triangular plane or another regular or irregular pattern and placed above the solid support and further comprising one or more illuminant source(s) placed under the solid support.

22. **(Previously presented)** The apparatus according to Claim 15, which comprises, placed above the solid support, one camera and a first illuminant source and, under said camera, a second illuminant source placed under the solid support, the two illuminant sources being placed almost symmetrically according to the position of the solid support.

23. **(Previously presented)** A computer comprising program code stored thereon for performing the steps of determining the possible presence of a precipitate in discrete regions and correlating the presence of said precipitate at the discrete regions with the identification and/or the quantification of a target compound, according to the method of Claim 1, when said program code is run on said computer.

24. **(Previously presented)** A computer program product comprising program code means stored on a computer readable medium for performing the steps of determining the possible presence of a precipitate in a discrete region and correlating the presence of the precipitate at the discrete region with the identification and/or the quantification of a target compound, according to the method of Claim 1, when said program is run on a computer.

25. **(Previously presented)** The method of claim 9, wherein the light beam is a laser beam.

26. **(Previously presented)** The apparatus of Claim 14, wherein the information(s) recorded upon said solid support are barcodes.

27. **(Previously presented)** The apparatus of Claim 14, wherein the results are the formation of a precipitate at a specific location.

28. **(Currently Amended)** The method of Claim 1, wherein said metallic precipitate is formed on the surface of a particle associated with said target compound.

29. **(Previously presented)** The apparatus of Claim 14, further comprising a device for reading information recorded upon said solid support.

30. **(Previously presented)** The apparatus of Claim 29, wherein said device for reading information comprises a bar code reader.

31. **(Previously presented)** The apparatus of Claim 14 wherein said computer is programmed to recognize discrete regions bearing said capture molecules.

32. **(Previously presented)** The apparatus of Claim 14, wherein said computer is programmed to detect and/or quantitate said target compounds.

33. **(Previously presented)** The method of Claim 1, wherein said sample is a biological sample.

SUMMARY OF INTERVIEW

Applicants thank the Examiner for extending the courtesy of a telephonic interview with Applicants' representatives on April 21, 2004, the substance of which is reflected in the interview summary below.

Exhibits and/or Demonstrations

None

Identification of Claims Discussed

1 and 3-33.

Identification of Prior Art Discussed

Lockhart et al. (USP 6,344,316); Roth (USP 5,902,727)

Proposed Amendments

Applicants' representatives discussed the amendments to the claims which are made herein and which were originally proposed in the Amendment submitted Nov. 5, 2002, which was not entered. In particular, the Applicants' representatives discussed the amendment reciting "performing a catalytic reduction of a metal present in solution."

Principal Arguments and Other Matters

Applicants' representatives discussed the lack of any teaching or suggestion of performing a catalytic reduction of a metal present in solution in the cited Lockhart reference (USP 6,344,316). Applicicants' representatives also discussed the non-obviousness of the amended claims over Roth et al. (USP 5,902,727), which states that silver enhancement of immunogold staining is not suitable for quantitative purposes, thereby teaching away from the present invention. In addition, the significant benefits of silver enhancement over colloidal gold alone were discussed. In particular, we discussed the significant increase in sensitivity resulting from silver enhancement versus colloidal gold alone and the fact that silver enhancement allows detection with infrared light as opposed to green light, thereby reducing the cost of the detection apparatus.

Results of Interview

The Examiner indicated that Lockhart does not teach or suggest "performing a catalytic reduction of a metal present in solution." The Examiner also noted that Roth does not appear to teach catalytic reduction of a metal in the context of microarrays and that Roth appears to teach away from the use of catalytic reduction of a metal present in solution in quantitative methods. The Examiner indicated that in order to have claims containing the limitation regarding catalytic

reduction examined it would be necessary to file a Request for Continued Examination (RCE) with the present amendments and arguments.